

## REMARKS

This Amendment is in response to the Office Action of 19 December 2007 in which claims 35 and 37-39 were rejected. With this Amendment, independent claim 35 has been amended and new claims 52-56 added. Reconsideration and allowance of the pending claims is earnestly solicited.

### I. Rejections under 35 USC §102

In the Office Action, claims 35 and 37-39 were rejected under 35 USC § 102(b) as allegedly being anticipated by Soykan et al. (U.S. Patent No. 6,206,914). With this Amendment, independent claim 35 has been amended to include subject matter not present expressly or inherently in Soykan.

Since Soykan must include *each and every claim limitation* for the present ground of rejection to stand, Applicant respectfully request that the rejection be withdrawn.

The Office Action also referred to Ecker et al. (U.S. Patent No. 5,702,427) which is referred to in Soykan et al. Ecker does not teach or suggest the present invention, as defined in independent claim 35.

With the amendment of independent claim 35, the rejection of claims 35 and 37-39 has been overcome and the application is now in condition for allowance. Applicant submits that dependent claims 52-56 too define patentable subject matter and should be allowed. Notice to that effect is requested.

Support for the limitations of the sole amended independent claim (and claims depending therefrom) can be found in the drawings and specification, including without limitation, FIG. 7 and FIG. 8 and paragraphs 7, 59 and 60, to wit:

[0007] According to one feature of the invention, the IMD delivers an alarm to the patient or begins delivering drug therapy, preferably delivery of rapid action thrombolytics, as a function of sensed electrical activity and the blood flow through the coronary sinus. For example, the IMD can

include an audible alarm, a muscle stimulating alarm or both. In addition, the IMD can include a drug delivery pump for dispensing therapeutic drugs or a catheter to deliver prophylactic arrhythmia therapy. The system can be constructed to vary the treatment, and notably the dosage, according to the sensed elevation of the ST segment and the blood flow.

[0059] FIG. 7 shows a trend curve 194 that graphically illustrates the mean blood flow velocity provided by flow sensor 22 as a function of time. Curve 190 illustrates a gradual drop in blood flow through coronary sinus over an extended period of time, which is indicative of long-term progression of either ischemic heart disease or a coronary sinus thrombosis. Upon crossing a trigger point 190, microcomputer circuit 58 activates an alarm indicating a detected cardiac condition. Trigger point 190 can be a programmable flow rate threshold measured in milliliters per minute, for example. Alternatively, trigger point 190 can be a programmable percentage drop, such as 25%, from a maximum of the mean flow rate of the blood through the coronary sinus as sensed by flow sensor 22.

[0060] FIG. 8 shows curves 196 and 197 that graphically illustrate the mean blood flow velocity signal from flow sensor 22 and the ST elevation trend sensed from heart 8, respectively. Curves 196 and 197 illustrates a sharp drop in blood flow through the coronary sinus followed closely by a sharp increase in the elevation of the ST segment of the electrocardiogram. More specifically, curve 196 drops below trigger point 200 at a time T1. Within a short period of time  $\lambda_{sub.T}$ , such as 1 to 3 seconds, curve 197 rises over the trigger point 201 at a time T2. The sharp drop in mean blood flow through the coronary sinus followed closely by an elevation in the ST segment indicates that a thrombus has likely occluded a coronary artery and an impending myocardial infarction is likely.

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## **II. Conclusion**

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned attorney to attend to these matters. The Commissioner is authorized to charge any deficiencies and credit any overpayments to Deposit Account No. 13-2546.

Respectfully submitted,

Date: February 20, 2007

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